



Tygon® ND 100-80 Tubing for Medical Device Manufacturers

Tygon® ND 100-80 tubing is made from a biocompatible polymer that is not formulated with DEHP. This tubing is crystal clear for easy visualization of fluid flow. The physical properties of Tygon ND 100-80 enable manufacturing of smaller diameter tubes with a high resistance to kinking and collapse.

Characteristics

Tygon ND 100-80 was formulated to meet the requirements of Regulation (EC) 1907/2006 on the Registration, Evaluation, Authorization and Restriction of Chemicals (REACH) and does not contain any reportable substances or chemicals of concern.

The unique chemistry developed by Saint-Gobain enables Tygon ND 100-80 to demonstrate very low extractables in both soapy water and refluxed water, which is rare for this type of material. Tygon ND 100-80 also demonstrates excellent blood interaction characteristics making it well suited for applications such as intravenous or intra-arterial infusion.

Tygon ND 100-80 has met the requirements of Biological Test for Plastics Class VI, as described in USP <88> (2017). Tygon ND 100-80 is not intentionally made or manufactured with animal derived material.

During the extrusion process, individual product dimensions are maintained and monitored through in-line micrometers and off-line verification with computerized imaging equipment. Consistent with many medical tubing market requirements, Tygon ND 100-80 can be effectively bonded/welded using the following methods: heat, electronic (RF)/ultrasonic, solvent and adhesive. Factors to be considered when selecting the components include: security of the bond required, effect on the integrity of the materials to be joined, and presence of residues or extractables that may affect biocompatibility. When bonding procedures are not used, mechanical clamps are recommended to provide secure attachment.

Features/Benefits

- High rigidity for kink resistance
- Compatible with blood
- Crystal clear for easy visualization of fluid flow
- Glass-smooth inner bore
- Reduced flexibility for suction applications
- Tygon® ND 100-80 has met the requirements of Biological Test for Plastics Class VI, as described in USP <88> (2017)
- No reportable substances or chemicals of concern for REACH

Typical Applications

- Intravenous or intra-arterial infusion

Tygon® ND 100-80 Tubing Manufactured Sizes

Part Number	Inside Diameter		Outside Diameter		Wall Thickness		Coil Length	French Size	Needle Gauge
	Inches	mm	Inches	mm	Inches	mm	Feet		
AAO4091	.010	.25	.030	.76	.010	.25	500	3	30
AAO4103	.020	.51	.060	1.52	.020	.51	500	5	23
AAO4119	.030	.76	.090	2.29	.030	.76	500	7	20 - 21
AAO4127	.040	1.02	.070	1.78	.015	.38	500	6	18 - 20
AAO4133	.050	1.27	.090	2.29	.020	.51	500	7	17 - 18

Custom sizes also available

Tygon® ND 100-80 Typical Physical Properties*

Property	ASTM Method	Value or Rating
Durometer Hardness, Shore A, 15 sec.	D2240	80
Color	—	Clear
Tensile Strength, psi (MPa)	D412	2,625 (18.1)
Ultimate Elongation, %	D412	350
Tear Resistance, lb-f/inch (kN/m)	D1004	275 (48.2)
Specific Gravity	D792	1.22
Water Absorption, % 24 hrs. @ 73°F (23°C)	D570	0.10
Compression Set, Constant Deflection, % @ 158°F (70°C) for 22 hrs.	D395 Method B	59
Maximum Recommended Operating Temp., °F (°C)	—	185 (85)
Brittleness by Impact Temp., °F (°C)	D746	-31 (-35)
Tensile Modulus, @ 100% Elongation, psi (MPa)	D412	1,450 (10.0)

*Unless otherwise noted, all tests were conducted at room temperature (73°F). Values shown were determined on 0.075" thick extruded strips, 0.075" thick molded ASTM plaques or molded ASTM durometer buttons.

Tygon® ND 100-80 Tubing Characteristics

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Tygon® ND 100-80 Tubing Sterilization Methods

Autoclavable (Steam 30 min at 15 psi, 250°F / 121°C) Yes

EtO (Ethylene Oxide) Yes

Radiation (25 kGy / 2.5 Mrad) Yes

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